67948

S/097/59/000/07/015/021
E141/E164

15.3200

AUTHORS: Volchanskaya, Ye.A. (Engineer) and
Frayfel'd, E.Ye. (Engineer)

TITLE: The Effect of the Magnitude of Pores of Aggregate on the Physical and Mechanical Properties of Light Concrete

PERIODICAL: Beton i zhelezobeton, 1959, Nr 7, p 323 (USSR)

ABSTRACT: The properties required of light aggregates for concrete are volumetric weight and strength. The volumetric weight is a basic requirement when properties of ballast from slag pumice are evaluated, as well as the method of its production. In YuZhNII investigations were carried out to clarify the effect of magnitude of pores of aggregate on physical and mechanical properties of light concrete. Testing samples were prepared from three identical concrete mixes with the same water-cement ratio and identical drying conditions. The only difference was the magnitude of pores of the aggregates. Three grades of slag pumice were used for the concrete, i.e. with pores up to 1 mm, from 1 to 3 mm, and over 3 mm. From each quality a mix was prepared from fractions 20 to 10 mm and 10 to 5 mm in the proportion of 1 : 1. In all three

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E141/E164

The Effect of the Magnitude of Pores of Aggregate on the Physical and Mechanical Properties of Light Concrete

mixes of concrete plasticizing grout with quartz sand was used. Characteristics of concretes based on ballast of varying porosity, and results of investigations are given in Table 1. The tests showed that the bigger the pores of aggregate, the higher the volumetric weight of the finished concrete. The consumption of cement in concrete based on coarse aggregate is higher than in concrete based on fine aggregate; this is explained by the fact that large pores are filled with grout, therefore the quantity of concrete decreases, but its volumetric weight increases as does also consumption of cement. After curing, the strength of concrete based on coarse aggregate with volumetric weight of 435 kg/m3 is lower than the strength of concrete based on fine aggregate with higher volumetric weight - 565 kg/m3. In the way described above the size of pores of aggregate affects the properties of light concrete. To obtain the lightest possible and most economical concrete it is necessary to use slag aggregate with minute pores.
There is 1 table.

Card
2/2

VOLCHANSKAYA, Ye.A., inzh.

Rigid heat insulating materials made of granulated mineral wool.
Sbor. trud. IUZHNII no.2:129-135 '59. (MIRA 13:9)

1. Yuzhnyy nauchno-issledovatel'skiy institut po stroitel'stvu.
(Mineral wool) (Insulating materials)

VOLCHANSKIY, I.A.

(1) 3

Chemical Abst.
Vol. 48 No. 5
Mar. 10, 1954
Metallurgy and Metallography

Cementation of steel with liquid hydrocarbons. I. A. Volchanskii. *Vestnik Mashinostroeniya* 33, No. 7, [illegible] (1953).—A general outline of the subject. M. Hosch

VOLCHANSKIY, I.A., inzhener.

Cementation of steel with liquid hydrocarbons. Vest.mash. 33 no.7:30-33 Jl '53. (MLRA 6:8)
(Cementation (Metallurgy))

BESSER, Yakov Ruvimovich, kand.tekhn.nauk; PROSKURNIN, Valentin Petrovich, inzh.; VOLCHANSKIY, R.A., nauchnyy red.; SOKOLOVA, M.A., red.; PERSON, M.N., tekhn.red.

[Assemblying precast reinforced concrete elements] Montazh sbornykh zhelezobetonnykh konstruktsii. Moskva, Vses. uchebno-pedagog. izd-vo Trudrezervizdat, 1958. 345 p. (MIRA 12:4)
(Reinforced concrete construction)

VOLCHANSKIY, Rostislav Andreyevich, kand.tekhn.nauk; KOPELYANSKIY, G.D., nauchnyy red.; PODOBED, E.G., red.; RAKOV, S.I., tekhn.red.; TOKER, A.M., tekhn.red.

[Making prefabricated reinforced-concrete elements and components] Izgotovlenie sbornykh zhelezobetonnykh konstruktsii i detalei. Izd.2., perer. i dop. Moskva, Vses.uchebno-pedagog.izd-vo Proftekhizdat, 1960. 339 p. (MIRA 14:3)
(Precast concrete construction)

VOLCHEGURSKIY, L.F.; ZHURAVLEV, V.S.

Structural relations between salt domes in the Caspian Lowland as revealed by a study of the family of the Sankebay-Kruglyy salt dome. Geotektonika no.2:94-105 Mr-Ap '65. (MIRA 18:5)

1. Vsesoyuznyy Aerogeologicheskiy trest Gosudarstvennogo geologicheskogo komiteta SSSR i Geologicheskiy institut AN SSSR.

VECHTOMOV, M.I., inzh.; KUDRYAVTSEV, V.A., inzh.; MALKES, D.A., inzh.;
OSTROVSKIY, G.I.;POVERENNYY, L.D.;SUSHKOV, P.M., inzh.;
TYULENEV, N.Z., inzh. Prinimali uchastiye: GALYAMOVA, N.S., inzh.;
PUTEYEVA, N.P.; IZRAYLOVICH, Ye.A., inzh.; MARCHENKO, G.A., inzh.;
MALYGINA, Z.S.; SOKOLOVA, Ye.A.; SOKOV, V.N., inzh.; TARASOVA,
S.N.; TASHAYEV, A.L., inzh.; FILIMONOV, S.V.; DRALICH, K.F.,inzh.,
nauch. red.; NOVITCHENKO, K.M., inzh., nauchnyy red.; SIMAKOV,
S.N., inzh., nauchnyy red.; FAKTOROVICH, Yu.A., kand. tekhn. nauk,
nauchnyy red.; STUPIN, Ye.N., otv. red.; LUTOV, N.S., red.;
IVANOV, V.S., red.; BAGUZOV, N.P., glav. red.; VOLCHEGORSKIY, M.S.,
zam. glav. red.; DOBRYNIN, S.N., red.; NAZAROV, I.A., red.;
KOLESNIKOV, S.I., red.; MEL'NIKOV, N.P., red.; SUSNIKOV, A.A.,red.;
STAROVEROV, I.G., red.; LYTKINA, L.S., red. izd-va; GORDEYEV, P.A.,
red. izd-va; OSENKO, L.M., tekhn. red.

[Handbook for the designer of industrial, residential, and public buildings and structures; organization of construction and execution of building and assembly operations. Industrial construction] Spravochnik proektirovshchika promyshlennykh, zhilykh i obshchestvennykh zdanii i sooruzhenii; organizatsiia stroitel'stva i proizvodstvo stroitel'no-montazhnykh rabot. Promyshlennoe stroitel'stvo. Pod red. P.M.Sushkova. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 372 p. (MIRA 15:2)

(Industrial buildings)

VOLCHEGORSKIY, M. S.

Ekonomia metalla, tsementa i lesa v stroitel'stve (Economizing Metal, cement, and lumber in construction) Moskva, Gosstroyizdat, 1953. 50 p. Diagrs.

SO: N/5
748
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VOLCHEGORSKIY, M.S., inzhener, redaktor.

[redacted]

[Economizing metal, cement and lumber in construction] Ekonomiia metalla, tsementa i lesa v stroitel'stve. [Redaktor M.S.Volchegorskii] Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1953. 50 p. (MLRA 7:2)

(Building)

PATRIN, P.A., inzh.; KORCHINSKIY, Ye.K., kand.tekhn.nauk; VOLCHEGURSKIY, L.A., inzh.

Testing double chamber kilns for kilning keramzit. Stroi.mat. 9 no.12:18-20 D '63. (MIRA 17:3)

VOLCHEGURSKIY, L.F.; MARKINA, I.G.

Gas potential of the Pliocene sediments of the mid-channel region of the Ural River in the Caspian Lowland. Neftegaz. geol. i geofiz. no.7:17-21 '64. (MIRA 17:8)

1. Vsesoyuznyy aerogeologicheskiy trest Ministerstva geologii i okhrany nedr SSSR.

SOV/5-58-6-8/13

AUTHOR: Volchegurskiy, L.F.

TITLE: On the Structural State and Genesis of Drainless Depressions of Southern Mangyshlak (O strukturnom polozhenii i genezise besstochnykh vpadin yuzhnogo Mangyshlaka).

PERIODICAL: Byulleten' Moskovskogo Obshchestva ispytateley prirody, Otdel geologicheskiy, 1958, Nr 6, p 109-117 (USSR)

ABSTRACT: There are many contradictory theories on the structural state and the origin of depressions in Southern Mangyshlak. The author and a number of geologists connect the origin of these depressions with the anticlinal **Beke-Bashkudukskaya** elevation. The author describes some of these depressions, the dimensions of which vary from 30 sq km to 1,500 sq km (the Karagiye Depression).

Card 1/3

SOV/5-58-6-8/13

On the Structural State and Genesis of Drainless Depressions of Southern Mangyshlak

He reaches the following conclusions: 1) the depressions of Southern Mangyshlak are located within the slopes of the Beke-Bashkudukskaya anticline conformably inclined in a southern direction; 2) these slopes are complicated by a series of slanting brachy-anticlinal folds, the axis of which is extended parallell to the Beke-Bashkuduk anticline; 3) these folds at present occur in most of the depressions. Moreover, other nascent depressions have been found on other sloping elevations of the Neogene deposits. The correlation of the depressions with the brachy-anticlinal elevations shows that the formation of these depressions started within the limits of these elevations. The dimension of these depressions depends

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SOV/5-58-6-8/13

On the Structural State and Genesis of Drainless Depressions of Southern Mangyshlak

on their age - the younger they are - the smaller they are. The author mentions the following geologists with several of whom he disagrees: S.Yu. Geller, V.Ye. Yegorova, V.A. Sergeyev, A.I. Dimakov and N.P. Luppov. There are 2 profiles, 2 maps and 6 Soviet references.

Card 3/3

VOLCHEGURSKIY, L.F.

Structural position and genesis of Mangyshlak depressions with interior drainage. Biul. MOIP. Otd. geol. 33 no.6:109-117 D-D '59. (MIRA 12:3)

(Mangyshlak Peninsula--Geology, Structural)

SOV/5-33-1-4/25

AUTHORS: Pleshcheyev, I.S. and Volchegurskiy, L.F.

TITLE: On Some Problems of Tectonics of the Eastern Part of Karagiye Depression (O nekotorykh voprosakh tektoniki vostochnoy chasti vpadiny Karagiye)

PERIODICAL: Byulleten' Moskovskogo obshchestva ispytateley prirody, Otdel geologicheskiy, 1958, Vol 33, Nr 1, pp 29-35 (USSR)

ABSTRACT: The authors studied the occurrence of small folds of white marle, of the Upper Eocene epoch, between the layers of the Oligocenic argyles in the Karagiye depression of the Mangyshlak peninsula on the Caspian Sea. Some of the geologists considered these folds as a manifestation of the Alpine tectogenesis. The detailed investigation of the occurrence of these folds by the authors showed that their formation was connected with the land-sliding processes which occurred in the Quaternary period. The authors cite similar fold formation resulting in land-sliding in various places along the Volga river. The formation of folds occurs when the advanced edge of lower layers of the sliding earth mass

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SOV/5-33-1-4/25

On Some Problems of Tectonics of the Eastern Part of Karagiye Depression

meets an obstacle; under the pressure of the overlying layers the lower layers then form folds. Such as those observed in the Karagiye depression. The authors disagree with the following geologists that worked in this region: M.V. Bayarunas, N.I. Andrusov, V.Ye. Yegorova, V.V. Belousov, V.N. Vinyukov, and A.P. Pavlov. There are 2 cross-sections, 1 map and 6 Soviet references.

Card 2/2

VOLCHEK, A.

At the Minsk Tractor Plant. NTO 2 no.11:40-42 N '60.
(MIRA 13:11)

1. Uchenyy sekretar' soveta pervichnoy organizatsii Nauchno-tekhnicheskogo obshchestva Minskogo traktornogo zavoda.
(Minsk--Tractor industry)

L 06303-67 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6015497 (A) SOURCE CODE: UR/0181/66/008/005/1625/1627

40
B

AUTHOR: Volchek, A. D.; Garger, K. S.; Korsunskiy, M. I.

ORG: Institute of Nuclear Physics, AN KazSSR, Alma-Ata (Institut yadernoy fiziki AN KazSSR)

21

TITLE: The lux-ampere characteristic of amorphous selenium at constant irradiation

SOURCE: Fizika tverdogo tela, v. 8, no. 5, 1966, 1625-1627

TOPIC TAGS: photoconductivity, selenium, spectral memory, dark conductivity, lux ampere characteristic

ABSTRACT: The behavior pattern of amorphous Se specimens with anomalous photoconductivity under simultaneous irradiation by two monochromatic light sources was investigated. A Se specimen was irradiated at a wavelength of $\sim$650 mμ, and with a constant irradiation at a wavelength of 450 mμ. The equations of the kinetics of dark and light conductivities agree with the experimental data; the value of the dark conductivity is a function of the light intensity. Orig. art. has: 2 figures, 5 formulas.

SUB CODE: 20/ SUBM DATE: 02Dec65/ ORIG REF: 002

Card 1/1 gd

VOLCHEK, A.M., inzh.

Polymer materials and equipment for processing them. Khim. i neft. mashinostr. no.9:37-39 S '65. (MIRA 18:10)

VOLCHEK, A.M.

All-Union scientific and technical conference on the anticorrosive protection of chemical apparatus. Zhur. VHKO 10 no.3:340-344 '65.
(MIRA 18:9)

VOLCHEK, A.M.

International symposium on modern problems in the development of thermoplastics and conference on rubber. Zhur.VKHO 10 no.5:578-580 '65. (MIRA 18:11)

VOLCHEK, A.M., inzh.; NOSOV, A.V., inzh.

Using polyethylene plated metal sheets for making containers. Khim.i neft. mashinostr. no.8:29-32 Ag '65.

(MIRA 18:12)

Category : USSR/Atomic and Molecular Physics - Physics of high-molecular substance D-9

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 1019

Author : Nikitin, V.N., Vol'kenskteyn, M.V., Volchek, B.Z.
Title : Investigation of the Stretching of Polymers in Polarized Infrared Light

Orig Pub : Zh. tekhn. fiziki, 1955, 25, No 14, 2486-2491

Abstract : The authors derived an equation for the ratio of the coefficient of absorption of two bands at various degrees of tension (K'_1/K'_2): (K''_1/K''_2), where the indices 1 and 2 pertain to bands ν_1 and ν_2 and the indices ' and '' pertain to the first and second stretchings. This ratio is unity if the content of the rotation isomers does not change with stretching. The stretching of polyethylene and polyvinyl acetate was investigated. It is shown that at elongations of 1,000% and more, the content of the rotation isomers changes. The stopping of the growth of dichroism at 100% elongation indicates the absence of further orientation.

Card : 1/1

NIKITIN, V.N.; VOLCHEK, B.Z.; LOMTEV-MILYAYEV, L.M.

Instrument for registering infrared absorption spectra by means
of self-recording potentiometers. Prib.i tekh.eksp.no.2:128-129
S-O '56. (MLRA 10:2)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
(Photoelectric measurements) (Spectrum, Infrared)

VOL[illegible]A, E.

PRIKHOT'KO, A F.

24(7) b 3 PHASE I BOOK EXPLOITATION SOV/1365

L'vov. Universytet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Its: Fizychnyy zbirnyk, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Gazer, S.L.; Tech. Ed.: Saranyuk, T.V.; Editorial Board: Landsberg, G.S., Academician (Resp. Ed., Deceased), Neporent, B.S., Doctor of Physical and Mathematical Sciences, Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences, Fabrikant, V.A., Doctor of Physical and Mathematical Sciences, Kornitskiy, V.G., Candidate of Technical Sciences, Rayskiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K., Candidate of Physical and Mathematical Sciences, Miliyanchuk, V.S., Candidate of Physical and Mathematical Sciences, and Glauberman, A. Ye., Candidate of Physical and Mathematical Sciences.

Card 1/30

Dianov-Klokov, V.I., and A.D. Stakhovskiy. Registering Device for Infrared Spectrometers 401

Markov, M.N. The Spectral Sensitivity of a Coated Low-inertia Bolometer 403

Mal'nev, A.F. Nickel Bolometers 405

Klimenko, P.L., and O.V. Fialkovskaya. Infrared Radiation Polarizers 407

Falitsyna, I.A. Analyzer Based on the SF-4 Spectrometer 409

Nikitin, V.N., B.Z. Volchak, and M.V. Vol'kenshteyn. Using Infrared Polarized Light in Determining the Orientation of Polymers 411

Pokrovskaya, Ye. I. Variations in the Infrared Spectra of Crystalline Polymers During Melting 416

Card 2/

VOLCHEK, B.Z.

AUTHORS: Nikitin, V. N., Volchek, B. Z. 57-27-7-35/40

TITLE: Determination of the Temperature at Which the Polymers are Converted to Glass, According to the Method of Polarized Infrared Spectra (Opredeleniye temperatury steklovaniya polimerov metodom polyarizovannykh infrakrasnykh spektrov).

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1957, Vol. 27, Nr 7, pp. 1616-1617 (USSR)

ABSTRACT: The ratio

$$M = \frac{D_{\parallel}}{D_{\perp}}$$

of oriented films in polyvinyl-acetate and in polyvinyl alcohol at different temperatures was investigated here. $D_{\parallel}$ and $D_{\perp}$ are the optical densities in the case of $E_{\parallel}$ and $E_{\perp}$. $E_{\parallel}$ is the electric vector of the light-wave which oscillates in parallel with the axis of expansion of the sample and $E_{\perp}$ is that which oscillates vertical to the axis of expansion. It was previously determined that the dichroism M after heating does not change its quantity for 15 minutes. During this time the equilibrated orientation of the chains practically stabilizes.

Card 1/2

Determination of the Temperature at Which the Polymers are Converted to Glass, According to the Method of Polarized Infrared Spectra 57-27-7-35/40

It is shown that the dichroism greatly decreases at $T = 30^{\circ}C$. This temperature corresponds to the temperature T_g at which polyvinylacetate is converted to glass which was checked according to another method. It is shown that the temperature at which the polymers are converted to glass is in direct connection with the mobility of the molecular chains. Infrared polarized light permits to determine this temperature for some polymers. There are 2 figures and 2 Slavic references.

ASSOCIATION: Institute for High Molecular Compounds AS USSR, Leningrad (Institut vysokomolekulyarnykh soyedineniy AN SSSR, Leningrad).

SUBMITTED: February 8, 1957

AVAILABLE: Library of Congress

Card 2/2

1. Polyvinylacetate-Chemical reactions-Temperature factors
2. Polyvinyl alcohol-Chemical reactions-Temperature factors
3. Infrared spectroscopy-Applications

VOLCHEK, B.Z.

57-8-26/36

AUTHORS Volchek, B.Z., Nikitin, V.N.

TITLE Investigation of Polyamides in the Polarized Infrared Light.
(Izucheniye poliamidov v polyarizovannom infrakrasnom svete.)

PERIODICAL Zhurnal Tekhn. Fiz., 1957, Vol. 27, Nr 8, pp. 1836-1839 (USSR)

ABSTRACT The fiber-forming polymeric substances Kapron and AGK (copolymeric substance of the AG salt and of the ε-Kaprolaktam 1:1) were investigated. The authors found out that in Kapron and AGK the $930\ \mathrm{cm}^{-1}$ ($10{,}74\ \mu$)-band which characterizes just as in nylon the crystalline part of the substance, is present. They also show that this band disappears at 180°C. The permeability, of this band increases from 170°C onward. In the case of more than 180° the band disappears and the permeability remains constant at 82%. It does not reach 100% because of "funds" in the spectrum. This way the melting temperature of the "crystallites" in the polymer can be determined. In expanded samples band $930\ \mathrm{cm}^{-1}$ has a strong dichroism

$$M = \frac{D_{\parallel}}{D_{\perp}}, \qquad D_{\parallel} \text{ and } D_{\perp}$$

being the optical densities in the case of $E_{\parallel}$ and $E_{\perp}$.

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57-8-26/36

Investigation of Polyamides in the Polarized Infrared Light.

($E_{\parallel}$ is the electric vector of the light wave oscillating parallel to the axis of expansion and $E_{\perp}$ - is that of the other kind oscillating vertically to the axis.) The dichroism increases to the rupture of the film. Its increase with expansion can be connected with the increase of the orientation of the crystallites present. The ratio between the absorption coefficient of the 930 and 1065 cm^{-1} bands in a not expanded sample and in a sample expanded to ~ 1000% was compared. The ratio for both bands showed to be equal to one which points at the unchangeable character of the crystallization degree in the case of an expansion of the sample. In the case of maximally expanded samples which were subjected to a heat treatment at various temperatures, the dichroism was shown to remain constant to ~86°C, and a further rise of temperature was shown to lead to an increase of the dichroism of up to 2,20. This value remains constant to ~160°C and the dichroism disappears at 180°C. Summarizing we can say that an increase of the crystallization degree takes place above the temperature of gas formation, which can be explained with the state of

CARD 2/3

57-8-26/36

Investigation of Polyamides in the Polarized Infrared Light.

disequilibrium. (With 5 illustrations and 5 Slavic references).

ASSOCIATION: Institute for Highly-Molecular Compounds AN USSR. (Institut vysokomolekulyarnykh soyedineniy AN SSSR. Leningrad)

SUBMITTED: February 8, 1957.

AVAILABLE: Library of Congress.

CARD 3/3

AUTHORS: Volchek, B. Z., Nikitin, V. N. SOV/57-58-8-24/37

TITLE: Investigation of the Process of Guttapercha Stretching by Means of Infrared Absorption Spectra (Issledovaniye protsessa rastyazheniya guttaperchi s pomoshch'yu infrakrasnykh spektrov pogloshcheniya)

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1958, Nr 8, pp. 1753 - 1758 (USSR)

ABSTRACT: This is an investigation of the infrared spectra of oriented and not oriented guttapercha films in the range of 700 - 1200 cm^{-1}. An ISP-14 infrared monochromatic spectrometer and a NaCl prism was used in the measurements. The evidence obtained shows that α- and β-guttapercha are characterized by absorption spectra differing within the range of 700 - 1200 cm^{-1}. The melting points of α- and β-guttapercha were determined from the disappearance of the bands corresponding to the crystalline state with rising temperature. When crystalline α-guttapercha is stretched, β-guttapercha is formed. This means that a rotational isomer to which corresponds a more stretched chain is produced. The stretching of β-guttapercha

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SOV/57-58-8-24/37

Investigation of the Process of Guttapercha Stretching by Means of Infrared Absorption Spectra

is most probably based upon an increase of the content of isomers with a more stretched chain in the amorphous part. There are 6 figures, 2 tables, and 12 references, 9 of which are Soviet.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy AN SSSR Leningrad (Institute of High-Molecular Compounds AS USSR, Leningrad)

SUBMITTED: January 7, 1958

Card 2/2

VOLCHEK, B.Z.

Infrared study of the swelling of nylon. Fiz.tver.tela 1 no.5: 803-807 My '59. (MIRA 12:4)

1. Institut vysokomolekulyarnykh soyedineniy, Leningrad.
(Nylon) (Infrared rays)

NIKITIN, V.N.; VOLCHEK, B.Z.

Spectroscopic manifestations of hydrogen bonding in polyamides. Vysokom.soed. 2 no.7:1015-1019 Jl '60. (MIRA 13:8)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
(Hydrogen bonding--Spectra)
(Polyamides--Spectra)

86290

S/190/60/002/008/001/017
B004/B054

5.3100 2209, 1228, 1372

AUTHORS: Volchek, B. Z., Roberman, Zh. N.

TITLE: Determination of "Microtacticity" in Polypropylene Chains by Means of Polarized Infrared Spectra

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 8, pp. 1157-1161

TEXT: The authors studied the problem of determining "microtacticity" in stereospecific polymers. After reviewing the difficulties arising in this connection on the basis of published data, they report on the attempt of determining the degree of "microtacticity" in the polypropylene chain by polarized infrared. The experiment was conducted in the range of 3000 - 2800 cm^{-1} by an ИСП-14б (ISP-14b) spectrometer. Five selenium films lying in the Brewster angle for $\lambda = 8\mu$ were used as polarizers. The polypropylene films were produced by pouring the polymer dissolved in Decalin (or hexane) onto glass, and stretched by 1000-1200% at 150-160°C (from hexane solution at room temperature). The temperature was controlled by

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Determination of "Microtacticity" in Polypropylene Chains by Means of Polarized Infrared Spectra

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an ЭПВ-2 (EPV-2) electronic potentiometer. The films were examined at different temperatures. They were placed between two electrically heated NaCl plates. Here, the temperature was controlled by an ЭПВ-01 (EPV-01) electronic potentiometer. The degree of crystallinity was determined by X-ray photography by A. I. Grigor'yev. The absorption spectra showed parallel dichroism ($D_{\parallel} > D_{\perp}$) for the bands 2845 and 2970 cm^{-1}, and perpendicular dichroism ($D_{\perp} > D_{\parallel}$) for the bands 2926, 2900, and 2875 cm^{-1}. To determine the effect of "microtacticity" on dichroism, the dichroism $M_1 = D_{\perp}/D_{\parallel}$ was determined for the band 2926 cm^{-1}, the dichroism $M_2 = D_{\parallel}/D_{\perp}$ for the band 2845 cm^{-1}, and M_1/M_2 was calculated to eliminate the orientation factor. Measurements of the optical density of these absorption bands of films heated up to 190°C revealed that temperature had no effect on the optical density. As the melting point of polypropylene crystallites lies at 175°C and the samples had a crystallinity of 65%, it was proved that the absorption bands chosen were unsusceptible to the degree of crystallinity. For the polypropylene samples produced with the catalysts $TiCl_3+Al(C_2H_5)_3$; $TiCl_4+Al(C_2H_5)_3$; $TiCl_3+Al(i-C_4H_9)_3$, M_1/M_2 lay between

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Determination of "Microtacticity" in Polypropylene Chains by Means of Polarized Infrared Spectra

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B004/B054

1 and 1.63 (Table 3). Besides, these values depended on the degree of stretching. This is explained by the fact that with increasing stretching also the content of rotation isomers corresponding to a longer chain increases. Thus, the ratio of the dichroism of the 2926 cm^{-1} band to that of the 2845 cm^{-1} band is only influenced by the change in "microtacticity". The authors mention V. I. Tsvetkov, S. Ya. Magarik, T. M. Birshteyn, O. B. Ptitsyn, and thank V. N. Nikitin and Yu. Ya. Gotlib for a discussion. There are 2 figures, 4 tables, and 16 references: 12 Soviet, 3 US, and 1 British.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy AN SSSR (Institute of High-molecular Compounds of the AS USSR)

SUBMITTED: March 12, 1960

Card 3/3

VOLCHEK, B. Z., CAND PHYS-MATH SCI, "Study ~~INVESTIGATION~~ OF THE STRUCTURE AND PROPERTIES OF POLYMERS by means ~~WITH THE AID~~ OF POLARIZED INFRARED RADIATION." LENINGRAD, 1961. (LENINGRAD ORDER OF LENIN STATE UNIVERSITY IMENI A. A. ZHDANOV).(KL-DV, 11-61, 208).

NIKITIN, V.N., kand.fiziko-matematicheskikh nauk; VOLCHEK, B.Z.

Study of polymers by infrared spectroscopy. Zhur.VKHO 6 no.4:374-382 '61. (MIRA 14:7)

(Polymers--Spectra)

√

NIKITIN, V.N.; VOLCHEK, B.Z.

Study of polymers by infrared spectroscopy (survey).
Zav.lab. 28 no.1:49-55 '62. (MIRA 15:2)
(Polymers—Spectra)

S/032/62/028/001/004/017
B124/B138

AUTHORS: Nikitin, V. N., and Volchek, B. Z.

TITLE: Infrared spectroscopic study of polymers

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 1, 1962, 49 - 55

TEXT: This paper surveys literature published on the chemical structural analysis of various polymers (polybutadiene, polyisoprene, gutta percha, natural rubber, polyethylene, polyvinyl chloride and polyvinylidene chloride together with copolymers, polyvinyl alcohol, polystyrene, polyethylene terephthalate, polytetrafluoroethylene, polytrifluoromonochloroethylene, cellulose and its derivatives), determination of crystallinity, rotational isomerism, detection of hydrogen bonds and stereoregularity of polymers using infrared absorption spectra as well as on the use of polarized infrared light. This article was the subject of a lecture on the Soveshchaniye po spektroskopii (Conference on Spectroscopy) in Gorkiy, July 5 - 12, 1961. M. P. Burgova and A. A. Korotkov (Ref. 14: Izv. AN SSSR, 14, 452 (1950)), Ye. I. Pokrovskiy (Ref. 36: Izv. AN SSSR, ser. fiz. 6 (1954)), M. V. Vol'kenshteyn (Ref. 60: Zhurnal fizicheskoy khimii,

S/032/62/028/001/004/017
B124/B138

Infrared spectroscopic...

26, 1072 (1952)), V. Kovey and S. Tsutsumi (Ref. 94: Chem. High. Polymer Sci. 17, 184 (1960)) are mentioned. There are 6 figures, 2 tables, and 105 references: 36 Soviet and 69 non-Soviet. The four most recent references to English-language publications read as follows: C. Liang, R. Marchessault. J. Polymer Sci., 43, 71 (1960); P. Burleich. J. Am. Chem. Soc., no. 5, 749 (1960); J. Brader. J. Appl. Polymer Sci., 3, 370 (1960); S. Krimm. J. Chem. Phys., 32, 3131 (1960).

Card 2/2

ANUFRIYEVA, Ye.V.; BOLOTINA, I.A.; VOLCHEK, B.Z.; ILLARIONOVA, N.G.; KALIKHEVICH, V.I.; KOROTKINA, O.Z.; MITIN, Yu.V.; PTITSYN, O.B.; PURKINA, A.V.; ESKIN, V.Ye.

Study of synthetic polypeptides. Report No.1. Transitions-intramolecular β-strucutre-coil in poly-S-carbobenzoxymethyl-L-cysteine. Biofizika 10 no.6:918-928 '65. (MIRA 19:1)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR, Leningrad. Submitted April 22, 1965.

ANUFRIYEVA, Ye.V.; VOLCHEK, B.Z.; ILLARIONOVA, N.G.; KALIKHEVICH, V.N.;
KOROTKINA, O.Z.; MITIN, Yu.V.; PTITSYN, O.B.; PURKINA, A.V.; ESKIN,
V.Ye.

Synthesis of poly-S-carbobenzoxymethyl-L-cysteine and the study of its structure. Biofizika 10 no.2:346-347 '65. (MIRA 18:7)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR, Leningrad.

VOLCHEK, B.Z.

Determination of the degree of microtacticity in isotactic polypropylene specimens. Vysokom. soed. 6 no.11:1952-1954 N '64
(MIRA 18:2)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

YUKHNOVSKIY, Yu.M.; PIRYAZEV, D.I.; VOLCHEK, F.R.

Rapid rolling conditions on blooming mills at the "Azovstal'" plant. Sbor. trud. UNIIM no.9:186-195 '64 (MIRA 18:1)

SLIN'KO, A.A.; VOLCHEK, F.R.

Metal pressure on the rolls of a 350 continuous rolling mill.
Sbor. trud. UNIIM no.9:217-222 '64 (MIRA 18:1)

SOV/133-59-6-22/41

AUTHORS: Gunin, I.V., Engineer; D.I.Piryazev, Candidate of Technical Sciences and Volchek, F.R., Engineer

TITLE: Residual Stresses in Beams and Channels (Ostatochnyye napryazheniya v balkakh i shvellerakh)

PERIODICAL: Stal', 1959, Nr 6, pp 544-546 (USSR)

ABSTRACT: Residual stresses in beams No 16 and channels No 18 of the usual and lightened type (GOST 8239-56 and GOST 8240-56) have been studied. The main dimensions of specimens - table 1; scheme of the distribution of strain gauges - Fig 1; the distribution of longitudinal residual stresses - Fig 2; the experimental results are assembled in table 2. It was found that: residual stresses in the wall of lightened beams are somewhat higher than in ordinary beams. The residual longitudinal stresses in beams and channels are practically equal. When beams and channels are submitted to bending the residual longitudinal stresses in flanges have the highest influence. The values of the latter in ordinary and lightened profiles differ only insignificantly. It is suggested that the causes of residual stresses should be investigated as well as

Card 1/2

SOV/133-59-6-22/41

Residual Stresses in Beams and Channels

the influence of these stresses on the service life of beams and channels. There are 3 figures and 2 tables.

ASSOCIATION: Ukrainskiy N.-I. institut metallov (Ukrainian Scientific Research Institute of Metals)

Card 2/2

SOV/32-24-9-29/53

AUTHORS: Tomenko, Yu. S., Navrotskiy, I. V., Volchek, F. R.

TITLE: The Computation of Impact Energy in Multiple Impact Tests (Raschet energii udara pri ispytaniyakh na povtornyy udar)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 9, pp 1122-1125 (USSR)

ABSTRACT: The latest ram impact machine models for multiple impact tests (DSVO -150) possess several construction details that have an essential influence on the impact energy. A diagram of the operation of the machine, and of the connection of an oscillograph MPO-2 is given. The oscillograph reveals the movement of the ram from the initial position to the impact. The operation of the machine is described, and the calculation methods by L. T. Timoshuk (Ref 1) is mentioned. From the analysis of the oscillograms it was found that, in principle, the machine may work in different ways, which fact is of significance for the computation of impact energy. There may be three different cases, a description of which is given. Graphs and calculation formulae are presented. The investigations of the operation of the ram at different spring tensions showed the separation factor of the roll from the ram to depend only on the clearance of the

Card 1/2

SOV/32-24-9-29/53

The Computation of Impact Energy in Multiple Impact Tests

spring, and not on the degree of its tension.
There are 4 figures and 1 reference, which is Soviet.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy institut metallov
(Ukrainian Scientific Institute of Metals)

Card 2/2

PIRYAZEV, D.I., kand.tekhn.nauk; GOLUBOV, M.M., inzh.; DABAGYAN, I.P., inzh.;
TIMOFEYEV, D.I., inzh.; MELESHKO, A.M., inzh.; KOVYNEV, M.V., inzh.;
Prinimali uchastiye: VOLCHEK, F.R.; SOKOLOV, B.A.; KRIVONOSOV, Yu.I.

Metal pressure on rolls and loading of the main motors during the operation of 2800 plate rolling mills. Trudy Ukr. nauch.-issl. inst. met. no.7:165-176 '61. (MIRA 14:11)
(Rolling mills--Electric driving)

L 26613-66 EWT(1)/EWP(e)/EWT(m)/ETC(f)/EPF(n)-2/EWG(m)/EWA(d)/EWP(v)/EWP(j)/T/

ACC NR: AP6013934 ETC(m)-6/EWA(1) IJP(c) SOURCE CODE: UR/0207/66/000/002/0135/0137

IG/WW/RM/WH

AUTHOR: Volchkov, E. P. (Novosibirsk); Levchenko, V. Ya. (Novosibirsk) 88 B

ORG: none

TITLE: Heat exchange during jet shielding of surfaces 7 15

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 2, 1966, 135-137

TOPIC TAGS: heat exchange panel, heat transfer, boundary layer flow, slender body, aerospace structure

ABSTRACT: The authors give experimental data on heat exchange during jet shielding of a smooth plate. The heat exchange surface was a steel plate with transverse grooves filled with epoxy resin to prevent the heat from flowing along the plate. Beneath the steel plate was an electric heater separated from the metal by an asbestos layer 0.5 mm thick. Heat exchange experiments were conducted on a tubular surface with and without forced gas cooling parallel to the surface. It is found that when the ratio of boundary layer thickness to tube radius reaches a certain point, the heat exchange process depends only on the nature of flow close to the tube and becomes self-similar with respect to this thickness. The coefficients of heat exchange with and without forced gas cooling are nearly the same for a very rough surface. Orig. art. has: 3 figures, 3 formulas.

SUB CODE: 20/ SUBM DATE: 23Sep64/ ORIG REF: 001/ OTH REF: 003

Card 1/1 BLG

L 61026-65 EWT(m)/EWP(w)/EWP(i)/EPF(n)-2/EWG(m)/EWA(d)/T/EWP(t)/EWP(b) Ps-4/Pu-4
IJP[illegible]

ACCESSION NR: AR5[illegible] [illegible]/006/0006/0006

56
B

SOURCE: Ref. zh. Metallurgiya, Abs. 6D39

AUTHOR: Mal'tsev, M. V.; Dolzhenkov, F. Ye.; Sigalov, Yu. M.; Volchek, F. R.; Bat', Yu. I.

TITLE: Investigation of a process for rolling columbium in a vacuum

CITED SOURCE. Sb. tr. Ukr. n.-i. in-t metallov, vyp. 10, 1964, 181-188

44,55

TOPIC TAGS: columbium, metal rolling, hot rolling, temperature dependence, vacuum

TRANSLATION: A study was made of the basic parameters of a process for rolling columbium in a vacuum and in air (spread, forward flow, friction coefficient, specific pressure, etc) over a wide range of temperatures from 300 to 1300C. It was established that the spread, friction coefficient, and specific pressure during rolling of columbium in a vacuum are slightly higher than during rolling in an air medium. The spread basically occurs as a result of barrel formation and of transition of the metal from the lateral faces to the contact faces. Specific

Card 1/2

L 61026-65
ACCESSION NR: AR5017425

pressure is only slightly dependent on temperature in the interval investigated.
A. Leont'yev

SUB CODE: MM ENCL: 00

Rolling in vacuum^{18}

Card 2/2

ACC NR: AP6035924 SOURCE CODE: UR/0413/66/000/020/0184/0185

INVENTOR: Krivonosov, Yu. I.; Zakharov, L. A.; Dolzhenkov, F. Ye.; Bat', Yu. I.; Volchek, F. R.

ORG: none

TITLE: Method of manufacture composite metal articles. Class 49, No. 187496

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 184-185

TOPIC TAGS: composite metal, ~~clad metal composite metal production~~ METAL ROLLING, COMPOSITE MATERIAL

ABSTRACT: This Author Certificate introduces a method for manufacturing two-layer or multilayer metal articles according to Author Certificate No. 111925. To simplify the manufacture of large articles, vacuum rolling of the pack is done only to obtain a sufficient bonding with a reduction of 5—15%. The rest of the rolling is done in air.

SUB CODE: 13/ SUBM DATE: 18Jul63/

Card 1/1 UDC: 621.771.8-419.5

SHNEYEROV, B.Ya.; VOLCHEK, F.R.

Roll surface temperature. Sbor. trud. UNIIM no.11:164-167 '65. (MIRA 18:11)

DOLZHENKOV, F.Ye.; KRIVONOSOV, Yu.I.; PIRYAZEV, D.I.; BAT', Yu.I.;
VOLCHEK, F.R.

Obtaining bimetal joints by rolling in vacuum. Sbor.trud.
UNIIM no.11:183-196 '65. (MIRA 18:11)

DOLZHENKOV, F.Ye.; KRIVONOSOV, Yu.I.; PIRYAZEV, D.I.; VOLCHEK, F.R.;
BAT', Yu.I.

Production of bimetals by the vacuum rolling method. Met. i gornorud. prom. no.3:34-35 My-Je '64. (MIRA 17:10)

L [illegible]-66 EWT(d)/EWT(m)/EWP(v)/EWP(k)/EWP(t)/ETI IJP(c) [illegible]

ACC NR: AR6009956 SOURCE CODE: UR/0137/65/000/012/D009/D010

AUTHOR: Dolzhenkov, F. Ye.; Krivonosov, Yu. I.; Piryazev, D. I.; Bat', Yu. I.; Volchek, F. R.

TITLE: Production of bimetal compounds by vacuum rolling

47
B

SOURCE: Ref. zh. Metallurgiya, Abs. 12D75

REF SOURCE: Sb. tr. Ukr. n.-i. in-t metallov, vyp. 11, 1965, 183-196

TOPIC TAGS: bimetal, metal rolling, titanium, low carbon steel

ABSTRACT: The optimal temperature for commencing the vacuum rolling (R) of Ti-steel bimetal is 1000°C. At higher temperatures liquid phase may form. It is desirable to terminate R at 800°C, since a decrease in temperature leads to a sharp rise in specific pressures as well as to the occurrence of considerable internal stresses in the bimetal layers. A high C content of steel adversely affects the cohesion to Ti, and hence it is desirable to use a steel with a lower C content as the base-layer Me. Reduction in R temperature and increase in reduction of area contribute to the decrease of the transition zone of the steel-Ti bimetal. During R of two-layer and sandwich packs with the P-plates positioned outermost, the difference in

Card 1/2 UDC: 621.771.001

L 42044-66

ACC NR: AR6009956

the deformation of layers increases with increase in reduction of area. As the thickness of the Ti layer decreases, its deformation resistance changes, and this leads to a change in the nonuniformity factor of the plastic deformation of the pack. The broadening of the contact surface of the pack is insignificant, reaching its maximum at the interface. The relation of specific pressure and torque to reduction in area, temperature, thickness ratio and other factors is investigated. 9 illustrations, 1 table. Bibliography of 6 titles. L. Kochenova. [Translation of abstract]

SUB CODE: 13, 11

Card 2/2 af

VOLCHEK, Grigoriy

Operativeness and mastery; creative spirit of Fairuza Latypova, news photographer of "Izvestiya." Sov.foto 22 no.3:7-10 Mr '62.
(MIRA 15:2)

(News photographers, Russian)

VOLCHEK, G.

The key to success. Okhr. truda i sots. strakh. 3 no.7:23-25 Jl '60. (MIRA 13:8)

1. Predsedatel' mestkoma Yaltinskoy kurortnoy polikliniki.
(Yalta—Sanatoriums) (Medicine, Clinical)

VOLCHEK, G.

Profile of a picture editor. Sov.foto 21 no.12:25 D '61.
(MIRA 14:12)

(Journalism, Pictorial)

VOLCHEK, Grigoriy, prepodavatel'

Is this adequate training for news photographers? Sov.foto 20 no.2:24 F '60. (MIRA 13:7)

1. Fakul'tet zhurnalistiki Moskovskogo gosudarstvennogo universiteta.
(Photography, Journalistic--Study and teaching)

VOLCHEK, G. A.

SOV/6100

PHASE I BOOK EXPLOITATION

Akademiya nauk SSSR. Institut tochnoy mekhaniki i vychislitel'noy tekhniki.

Trudy (Academy of Sciences of the USSR, Institute of Precision Mechanics and Computer Technology. Transactions) no. 2. Moscow, 1961. 447 p. 1000 copies printed. Contributors not mentioned.

PURPOSE: This collection of articles is intended for scientific and technical personnel concerned with machine translation and computer technology.

COVERAGE: This collection of articles of the Institute of Precision Mechanics and Computer Technology, Academy of Sciences USSR, is the second in a series concerned with machine translation and mathematical linguistics. The collection contains reports written by members of the Machine-Translation Group of the Institute as well as reports by researchers from other organizations. The articles deal with various problems in machine translation, such as the possibility of an intermediate language, relationships between various languages, systems of recording, structure of algorithms, methods of independent analysis of a number of languages (Chinese, German, English, Russian, Rumanian, Swedish, Tartar, etc.), independent synthesis of the Russian language, some problems of binary Japanese-Russian and Chinese-Russian translation, theoretical translation problems, and problems associated with automatic recognition of speech elements and the introduction of written texts. No personalities are mentioned. There are 11 references: 2 Soviet and 9 English.

TABLE OF CONTENTS:

1. Preface 3

2. Belokrinitskaya, S. S., G. A. Volchek, M. B. Yefimov, A. A. Zvonov, T. M. Nikolayeva, and G. A. Tarasova. One of the Possible Approaches to the Building-Up of a Vocabulary for an Intermediate Language 5

3. Zholkovskiy, A. K., N. N. Leont'yeva, and Yu. S. Martem'yanov. On the Fundamental Use of Meaning in Machine Translation 17

VOLCHEK, I., kandidat tekhnicheskikh nauk; NIKOL'SKIY, N., kandidat tekhnicheskikh nauk; PUSHEV, M., inzhener.

Develop the production of heat and sound insulating materials. Stroi.mat.,izdel.i konstr. 1 no.11:22-24 N '55. (MLRA 9:5)
(Insulation (Heat)) (Insulation (Sound))

GORYAINOV, K., doktor tekhn. nauk.; VOLCHEK, I., kand.tekhn.nauk;
KUPRIYANOV, V., kand.tekhn. nauk; LIZOGUB, A., inzh.

Using cinder from heat and electric power plants in making large porous blocks. Stroi. mat. 4 no.8:14-17 Ag '58. (MIRA 11:9)
(Cinder blocks)

VOLCHEK, I.A., kand. tekhn. nauk.

Using cinder in making lightweight concrete. Biul. stroi. tekh.
15 no.5:15-16 My '58. (MIRA 11:6)

1. Nauchno-issledovatel'skiy institut po stroitel'stvu.
(Lightweight concrete--Testing) (Cinder blocks)

ANDREYEV, Yu.K.; VOLCHEK, I.I.; YEREMEYEV, V.P.; PETROV, V.P.;
TOKMAKOV, P.P.

Asbestos potential of the U.S.S.R. Zakonom. razm. polezn. iskop. 6:113-152 '62. (MIRA 16:6)

1. Institut geologii rudnykh mestoroshdeniy, petrografii, mineralogii i geokhimii AN SSSR i Ministerstvo geologii i okhrany nedr SSSR.

(Asbestos)

VOLCHEK, I.M.; YABLONOVSKIY, N.I.

Connecting automatic offices of district-wide communication service into selective networks. Avtom. telem. i sviaz' 2 no.12:23-24 D '58.
(MIRA 11:12)

1. Zamestitel' nachl'nika sluzhby signalizatsii i svyazi Privolzhskoy dorogi (for Volchek). 2. Nachal'nik dorozhnoy laboratorii signalizatsii i svyazi Privolzhskoy dorogi (for Yablonovskiy).
(Railroads--Telephone)

AUTHORS: Zuyev, V.T., and Volchek, I.M. SOV/19-58-6-615/685

TITLE: A Device for Feeding Soles Into Glazing Machine (Prisposobleniye dlya podachi podoshv v mashinu dlya stekleniya)

PERIODICAL: Byulleten' izobreteniy, 1958, Nr 6, p 136 (USSR)

ABSTRACT: Class 71c, 54$_{03}$. Nr 113695 (589643 of 8 Jan 1958). Submitted to the Committee for Inventions and Discoveries at the Ministers Council of USSR. A sole feed device designed for treating shoe soles at a set angle to the sole axis and at a set distance from the heel; in the form of two flat plates connected by distance pins, provided with protrusions at the tip and on the sides to fix the sole.

Card 1/1

S/0191/64/000/001/0068/0071

ACCESSION NR: AP4009840

AUTHORS: Ramzaytsev, V.D.; Volchek, I.S.; Dvorkina, T.V.; Krichmar, G. Ya.; Luzhkov, Yu. M.; Frenkel', M.D.

TITLE: Experimental automation of plastic testing for heat resistance

SOURCE: Plasticheskiye massy*, no. 1, 1964, 68-71

TOPIC TAGS: plastic materials testing device, testing plastics heat resistance, testing plastics deformation

ABSTRACT: Since standard installations for testing heat resistance and deformation of plastic materials are very imperfect, inaccurate, slow and subject to mistakes due to reliance on visual observation, an automatic device programmed for measurement and recording of temperature has been designed. Described in detail, this device, which can be used wherever thermomechanical tests are made as well as in dilatometry, basically consists of an EPP-06M1 potentiometer,

Card 1/2

ACCESSION NR: AP4009840

program controls, measurement and recording of temperature, automatic measurement and recording of deformations, and automatic changes of operation rate. Thermocouples, electronic probes, amplifiers, differential transformer induction systems, and measuring bridges are used in the circuit and their functions are also described. Orig. art. has 7 figures, no formulas, no tables.

ASSOCIATION: None

SUBMITTED: 00 DATE ACQ: 10Feb64 ENCL: 00

SUB CODE: AP NO REF SOV: 006 OTHER: 000

Card 2/2

RAMZAYTSEV, V.D.; VOLCHEK, I.S.; DVORKINA, T.V.; KRICHMAR, G.Ya.;
LUZHKOV, Yu.M.; FRENKEL', M.D.

Experience in the automation of the testing of plastics for heat resistance. Plast.massy no.1:68-71 '64. (MIRA 17:6)

OSTROVSKAYA, A.S.; LUZHKOV, Yu.M.; VOLCHEK, I.S.; STREL'TSOV, V.I.

Method of continuous automatic control of the composition of technical formalin. Plast. massy no.11:63-65 '64 (MIRA 18:1)

PARLASHKEVICH, N.Ya., kand.tekhn.nauk; KOGAN, I.N.; RUBINSHTEYN, V.V.;
MAY, A.V.; VOLCHEK, I.S.

Automation of the production of phenol-formaldehyde resins. Zhur.
VHKO 6 no.5:539-544 '61. (MIRA 14:10)
(Phenol condensation products) (Automation)

VOLCHEK, I. S.

3

S/081/61/000/022/064/076
B101/B147

AUTHORS: Parlashkevich, N. Ya., Luzhkov, Yu. M., May, A. V., Volchek, I. S., Kogan, I. N., Pubinshteyn, V. V., Vurzel', F. B.

TITLE: Some problems of automatic control and regulation in phenol-formaldehyde resin production

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 22, 1961, 444, abstract 22P8 (Mekhaniz. i avtomatiz. proiz-va, no. 3, 1961, 17 - 20)

TEXT: Concentration of catalyst in phenol-formaldehyde resin (PFR) and viscosity are the most important characteristics determining the condensation process and the quality of the finished product. The authors describe schemes for controlling the catalyst concentration in continuous production processes of PFR, basing on a change in the electrical conductivity of the mixture, which evidently depends on the concentration of the hydrochloric or oxalic acid in the mixture. For the automatic control of PFR viscosity, they suggest the use of an ultrasonic viscosimeter. A diagram for the continuous control of viscosity is given. [Abstracter's note: Complete translation.]

Card 1/1

L 14532-63 EPR/EWP(j)/EPF(c)/EWT(m)/BDS/ES(s)-2 AFFTC/ASD/SSD Ps-4/
Pc-4/Pr-4/Pt-4 Rm/WW/MAY

ACCESSION NR: AP3004778 S/0191/63/000/008/0060/0061 85
84

AUTHOR: Lushkov, Yu. M.; Volchek, I. S.; Krichmar, G. Ye.; Remzaytsev, V. D.; Vishnyak, Yu. I.; Parlashkevich, N. Ya.

TITLE: Automatic device for determining the thermal stability 15 of polymers

SOURCE: Plasticheskiye massy*, no. 8, 1963, 60-61

TOPIC TAGS: thermal stability, polymer thermal stability, polyformaldehyde thermal stability, degradation, polymer degradation, weight change, weight-change measurement, automatic weight-change measurement, weight recording, automatic weight recording, photohead, automatic device

ABSTRACT: A device for the automatic measurement and recording of weight changes during the degradation of polymeric materials has been developed at NIIPM. It consists of an ADV-200 balance, a photoelectric servomechanism, a reversible motor, a measuring slide wire, an electromagnetic balancing system, and a recording device. The schematic and the circuit diagrams of the device are shown in Figs. 1 and 2 of the Enclosure. In operation, the photohead tracks the position of the balance pointer. Unbalance changes the ratio of illuminated to dark

Card 1/3

L 14532-63

ACCESSION NR: AP3004778

area in the photoresistor, causing its resistance to change. An unbalance signal is sent to the input of the amplifier of the servomechanism. The new device was used for determining the thermal stability of polyformaldehyde. 15. A characteristic degradation curve for this material at 222C recorded with the device is shown in Fig. 3. Orig. art. has: 5 figures.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 28Aug63 ENCL: 03

SUB CODE: CH, MA NO REF SOV: 003 OTHER: 001

Card 2/5

VOLCHEK, I.Z., inzh.; BUKHGALTER, V.D., inzh.; KUZNETSOV, G.F., inzh.

Manufacture of asbestos-silicate insulating articles. Mont. i spets. rab. v stroi. 24 no.5:13-15 My '62. (MIRA 15:5)

1. Nauchno-issledovatel'skiy institut stroitel'noy promyshlennosti i Glavteplomontazh.

(Insulating materials)

VOLCHEK, I.A.; SLENYA, Z.F.

Effect of the pressure force of semidry asbestos cement mixtures on the physicomechanical properties of sheet products. Trudy NIIAsbesttsementa no.19:21-30 '65. (MIRA 18:9)

VOLCHEK, I.Z., kand.tekhn.nauk

Asbestos silicate insulating articles. Stroi.mat. 7 no.5:9-13
My '61. (MIRA 14:6)
(Silicates) (Insulating materials)

SOV/19-58-6-633/685

AUTHORS: Goryaynov, K.E., Zasedatelev, I.B., Avrutin, M.L., Volchek, I.Z., and Lizogub, A.L.

TITLE: A Method of Producing Concrete, Silicate and Other Products (Sposob izgotovleniya betonnykh, silikatnykh i drugikh izdeliy)

PERIODICAL: Byulleten' izobreteniy, 1958, Nr 6, p 140 (USSR)

ABSTRACT: Class 80a, 9_{10}. Nr 113746 (587315 of 2 Dec 1957). Submitted to the Committee for Inventions and Discoveries at the Ministers Council of USSR. Producing concrete, silicate and similar products in autoclaves by steaming under pressure, and preventing detrimental temperature stresses from appearing in the products as well as speeding up the work process by producing a vacuum in the autoclave after the process.

Card 1/1

VOLCHEK, I.Z., kand.tekhn.nauk

Using rheological characteristics in evaluating the hardening processes of porous concretes before hardening them in autoclaves. Trudy NIIZHB no.8:229-236 '59. (MIRA 13:4)

1. Nauchno-issledovatel'skiy institut po stroitel'stvu.
(Lightweight concrete)

36763
S/081/62/000/001/045/067
B168/B101

15.2210

AUTHOR: Volchek, I. Z.

TITLE: Asbestos-silicate heat-insulating articles

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 1, 1962, 365, abstract 1K341 (Stroit. materialy, no. 5, 1961, 9-13)

TEXT: Results of experiments conducted under factory conditions with a view to establishing the principal production parameters for asbestos-silicate heat-insulating materials are presented. It is established that the presence of asbestos prevents a fall in the strength of the material due to drying. Methods of speeding up the process of manufacturing asbestos-silicate heat-insulating articles are indicated. In addition to good heat-insulating properties, asbestos-silicate materials possess high mechanical strength, which enables large-sized articles to be produced from them. In articles with a density of 200-400 kg/m^3 their bending strength is 5-14 kg/cm^2 and their heat conductivity coefficient is 0.06-0.078 kcal/m·hr·°C. [Abstracter's note: Complete translation.]

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VOLCHEK, I.Z., kand.tekhn.nauk; GRACHEVA, O.I., kand.tekhn.nauk

Studying the hardening process of asbestos-silicate insulating materials. Stroi.mat. 8 no.10:35-38 O '62. (MIRA 15:11)
(Insulating materials)

VOLCHEK, I.Z., kand.tekhn.nauk

Making asbestos-silicate heat-insulating materials. Mont.i spets. rab.v stroi. 22 no.3:18-20 Mr '60. (MIRA 13:6)

1. Nauchno-issledovatel'skiy institut stroitel'noy promyshlennosti; Glavteplomontazh, Minstroy RSFSR.
(Insulation (Heat))

PARLASHKEVICH, N.Ya., kand.tekhn.nauk; LUZHKOV, Yu.M., inzh.; MAY, A.V., inzh.;
VOLCHEK, I.S., inzh.; KOGAN, I.N., inzh.; RUBINSHTEYN, V.V., inzh.;
BURZEL', F.B., inzh.

Automatic control and regulation in the production of phenol formaldehyde. Mekh. i avtom. proizv. 15 no.3:17-20 Mr '61.
(MIRA 14:3)

(Automatic control) (Formaldehyde)

GORYAYNOV, K.E., doktor tekhn.nauk; YEFIMOV, A.D.; VOLCHEK, I.Z.; AVRUTIN, M.L.; ZASEDATELEV, I.B.; NECHAYEV, G.A., red.izd-va; PUL'KINA, Ye.A., tekhn.red.

[Large aerated-cement wall blocks; practices of the Main Administration for Housing and Public Construction in the city of Leningrad] Krupnye gazobetonnye stenovye bloki; iz opyta Glavleningradstroia. Pod red. K.E.Goriainova. Leningrad, Gos.izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1959. 102 p. (MIRA 13:1)
(Leningrad--Building blocks) (Lightweight concrete)

VOLCHEK, I.Z., kand. tekhn. nauk; KUKUSHKIN, A.I.; ZINOV, I.I.

Improving methods for producing vulcanite. Stroi. mat. 5 no.10:14-18
O '59. (MIRA 13:2)

1.Glavnyy inzhener tresta Montazhtermoizdeliya (for Kukushkin)
2.Glavnyy inzhener Inzenskogo diatomovogo kombinata (for Zinov).
(Rubber)

KUDRYASHEV, I.T., kand.tekhn.nauk. Prinimali uchastiye: POPOV, N.A., prof., doktor tekhn.nauk; YEROFEYEVA, Ye.A., kand.tekhn.nauk; GORYAINOV, K.E., doktor tekhn.nauk; VOLCHEK, I.Z., kand.tekhn.nauk; KUPRIYANOV, V.P., kand.tekhn.nauk; YAKUB, I.A., kand.tekhn.nauk; KEVESH, P.D., kand.tekhn.nauk; ERSHLER, E.Ya., inzh.. KHAVIN, B.N., red.izd-va; STEPANOVA, E.S., tekhn.red.; SOLNTSEVA, L.M., tekhn.red.

[Technical instructions for the manufacture of prefabricated elements from cellular autoclave concrete] Teckhnicheskie usloviia na izgotovlenie sbornykh izdelii iz avtoklavnykh iacheistykh betonov. Moskva, Gos.izd-vo lit-ry po stroit., arkhit., i stroit.materialam, 1959. 79 p. (MIRA 12:6)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut betona i zhelezobetona, Perovo. 2. Nauchno-issledovatel'skiy institut betona i zhelezobetona Akademii stroitel'stva i arkhitektury SSSR (for Kudryashev). 3. Moskovskiy inzhenerno-stroitel'nyy institut imeni V.V.Kuybysheva (for Popov, Yerofeyev). 4. Nauchno-issledovatel'skiy institut po stroitel'stvu Minstroya RSFSR (for Goryainov, Volchek, Kupriyanov, Yakub). 5. Nauchno-issledovatel'skiy institut zhelezobetona Glavmoszhelezobetona (for Kevesh, Ershler). 6. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Popov).
(Precast concrete)

GORYAYNOV, K.E., doktor tekhn.nauk; VOLCHEK, I.Z., kand.tekhn.nauk;
ZASEDATELEV, I.B., inzh.

Using lightweight cinder concrete in making large wall blocks. Bet. i zhel.-bet. no.6:229 Je '58. (MIRA 11:6)
(Cinder blocks)

VOLCHEK, I.Z.

GORYAYNOV, K.E., doktor tekhn. nauk; YEFIMOV, A.D.; VOLCHEK, I.Z., kand.
tekhn. nauk; AVRUTIN, M.L., inzh.; LIZOGUB, A.A., inzh.;
ZASEDATELEV, I.B., inzh.

Large wall blocks made of autoclave hardened lightweight concrete.
Biul. tekh. inform. 4 no.2:1-5 F '58. (MIRA 11:3)

1. Chlen-korrespondent Akademii stroitel'stva arkhitektury (for Yefimov).

(Concrete blocks) (Lightweight concrete)

VOLCHEK, I. Z.

[illegible]

Hydraulic Properties of High Alumina Slags in Relation to Their Phase Characteristics. I. Z. Volchok. (*Doklady Akademii Nauk S.S.S.R.*, 1953, 90, (3), 437-440). [In Russian]. A study of the hydraulic properties of high alumina (46-50%) slags in relation to their phase composition is reported. Variations in phase composition were obtained by varying the cooling rate of fused slags. The results showed that glassy slags possess a considerable hydraulic activity. It was also shown that the hydraulic activity of some slags can be considerably increased by suitable conditions of crystallization.

10-12-54

VOLCHEK, I. Z.

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10747* (Temperature Resistance of Glass and Mineral Fiber.) Temperaturoustoichivost' stekliannogo i mineral'nogo volokna. I. Z. Volchek. *Steklo i Keramika*, v. 11, no. 5, May 1954, p. 27-28.

Tests determine temperature of incipiant fusion of a fiber mat using a load of 20 g. per cm.^{2}. Tables. 3 ref.

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11-11-5